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THE CRANE-FLIES OF NEW YORK: SECOND  
SUPPLEMENTARY LIST.

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The first addition to the general list of the Tipuloidea of New York State was published in this BULLETIN (Vol. 17: 58-62, 1922). The following additions and corrections are the result of collections made chiefly in 1923, by Drs. Crampton and Leonard and the writer.

The additions to the list of New York Crane-flies are as follows:

278 *Antocha opalizans* Osten Sacken. This species has long been considered as being a synonym of *A. saxicola* Osten Sacken, and was so held in the general list of 1919. There is no doubt, however, that the two species are entirely valid. The following records certainly pertain to true *opalizans*:

Albany County: Helderbergs, June 5, 1923 (C. P. Alexander).

Essex County: Keene Valley, August 13, 1920 (Howard Notman).

279 *Molophilus cramptoni* sp. n.

Rensselaer County: Brookview, June 20-30, 1923 (C. P. Alexander).

280 *Molophilus quadrispinosus* sp. n.

Tompkins County: Needham's Glen, Ithaca, June 4, 1921 (C. P. Alexander).

(183) *Rhaphidolabis (Plectromyia) confusa* sp. n. This species was recorded as being *R. (P.) modesta* Osten Sacken in the general list of 1919. The latter is known only from the White Mts., N. H.

- Albany County: Helderbergs, June 5, 1923 (C. P. Alexander).
- Erie County: Holland, May 21 (M. C. VanDuzee).
- Fulton County: Mountain Lake, June 13, 1916 (C. P. Alexander).
- 281 *Rhaphidolabis (Rhaphidolabis) forceps* sp. n.  
Albany County: Helderbergs, June 5, 1923 (C. P. Alexander).
- Rensselaer County: Brookview, June 16, 1923 (C. P. Alexander).
- 282 *Tipula centralis* Loew.  
Albany County: Helderbergs, June 18, 1923 (C. P. Alexander).
- Essex County: Mt. McIntyre, at less than 4,000 feet, July 1, 1923 (M. D. Leonard).

Before describing the four new species mentioned above, the writer would like to discuss briefly two of the most interesting localities for Tipulidae in Eastern New York.

*The Helderberg Mountains, Albany County.*

The magnificent escarpment known as the Helderbergs is largely included within the 350 acres of the John Boyd Thacher State Park, the superintendent of which is the Entomologist, Mr. John H. Cook. This long and narrow park contains most of the cliffs of the Helderbergs, including the Indian Ladder. The park is easily reached by automobile from Albany, via the state road through Altamont. By train, one may take the D. and H. line from Albany to Meadowdale, whence a two mile walk and climb leads to the Indian Ladder. In the general list of 1919 several Helderberg records were included. During the season of 1923 the writer was twice able to visit this splendid collecting ground, the first time on June 5th, in company with Dr. G. C. Crampton, the second on June 18-19, when the writer climbed the cliffs and spent the night in the large cave near the Ladder. The results of these two trips may be briefly summarized:

On the 5th: *Dicranomyia badia*; *D. pudica*; *D. liberta*, one being the prey of an Empid; *Geranomyia rostrata*; *Limonia cinctipes*; *Antocha opalizans*; *Erioptera (Empeda) stigmatica*; *Molophilus hirtipennis*; *Gonomyia subcinerea*; *Epiphragma fascipennis*; *Dactylolabis montana*, abundant on the cliffs; *Limnophila subcostata*, one the prey of an Empid; *L. (Prionolabis) rufibasis*;

*L. areolata*; *Pilaria quadrata*; *Adelphomyia minuta*; *Tricyphona inconstans*; *Rhaphidolabina flaveola*; *Rhaphidolabis (Plectromyia) confusa* sp. n.; *R. (R.) forceps* sp. n.; *Tipula trivittata*; *T. margarita*: This rare species was hitherto known only from the unique type ♂ taken in Tompkins County in June. A few of both sexes were found in the piney woods at the foot of the trail leading to the top of the cliffs, the first observed specimen being noted walking across the road by Dr. Crampton. All specimens taken, representing both sexes, were observed fluttering along, only a few inches above the ground. On the 18th, careful search was made for them but they had quite disappeared; *T. submaculata*; *T. iroquois*; *T. angustipennis*; *T. senega*; *T. sarta*; *T. tephrocephala*; *T. cayuga*; *Nephrotoma incurva*.

By the 18th, the character of the Tipulid fauna of the Park had changed materially, as shown by the following list of captures: *Dicranomyia badia*; *D. pudica*; *D. simulans*; *Limonia cinctipes*; *L. indigena*; *Helius flavipes*; *Molophilus pubipennis*; *M. hirtipennis*; *M. ursinus*; *Ormosia deviata*; *Gonomyia subcinerea*; *Tricyphona inconstans*; *Pedicia albivitta*; *Rhaphidolabina flaveola*; *Dolichopeza americana*; *Oropeza venosa*; *Tipula abdominalis* (larvae); *T. oropezoides*; *T. cayuga*; *T. hermannia*; *T. centralis*, the first record of this Northern fly for the State; *T. senega*; *T. macrolabis*; *T. sarta*; *T. trivittata*; *T. valida*; *T. fuliginosa*, and *T. submaculata*.

*Becker's Woods, Brookview, Rensselaer County.*

This interesting bit of woodland lies along the Moordenerkill, a stream of moderate size that eventually finds its way into the Hudson a few miles below Albany. The ends of the woods are high and dry but midlength of the area lies a triangular portion that is swampy, traversed by several small, clear trout streams. This latter portion of the woods was found to be especially rich in Tipulidae. In June it is covered with great numbers of skunk cabbage, seedlings of *Impatiens*, and, in fewer numbers, golden ragwort. Towards the uplands, considerable yew enters in and on the higher and dryer portions becomes dominant, though skunk cabbage is found scattered about almost throughout the woods. By the end of June the *Impatiens* has virtually overtopped the skunk cabbage.

The forest cover of this swampy area includes the dominant hemlock and yellow birch, and in fewer numbers, white pine, but-

ternut, basswood, red and sugar maples and white ash. Among the shrubs and low trees, yew, as described above, is dominant, with lesser numbers of blue-beech, witch hazel and spice-bush entering in. The ground-cover, besides the dominant skunk cabbage and *Impatiens*, includes an abundance of *Chrysosplenium* in the hollows, sensitive and cinnamon ferns, the latter on dryer spots, and as lianas, poison ivy and woodbine. The Tipuloidea occurred in great abundance in this swampy portion, being especially abundant in the tension zone where the skunk cabbage is replaced by yew. The crane-flies noted in this area of Becker's woods, June 7-21, 1923, are as follows:

*Dicranomyia immodesta*; *D. pubipennis*; *D. liberta*; *Limonia solitaria*; *Antocha opalizans*; *Erioptera venusta*, dominant; *E. caloptera*; *E. stigmatica*; *E. septentrionis*; *E. megophthalma*; *Gonomyia florens*; *G. cognatella*; *G. blanda*; *G. subcinerea*; *Molophilus pubipennis*; *M. cramptoni* sp. n.; *M. ursinus*; *Ormosia pygmaea*; *O. nigripila*; *Epiphragma fascipennis*; *Limnophila aleni*: Only a few scattered individuals of this magnificent fly, taken on the 7th, 9th and 21st. They rest with the wings incumbent, legs spread, on the upper side of leaves of skunk cabbage; *L. tenuicornis*; *L. subtenuicornis*; *L. macrocera*; *L. rufibasis*, dominant; *L. areolata*; *L. fuscovaria*: Dominant, resting with wings incumbent, on leaf, the head held close to the resting place, the abdomen tilted upward at an angle of about 45°; *L. brevipurca*; *L. subcostata*; *L. sylvia*: Swept from the low vegetation along trout streams; noted flying low over damp spots in the woods, ♂♂ only; *L. adusta*, variety; *L. lenta*; *Pilaria tenuipes*; *P. recondita*; *P. quadrata*; *P. stanwoodae*: In yew zone; *Pseudolimnophila luteipennis*; *P. nigripleura*; *P. toxoneura*; *Adelphomyia minuta*; *Ulomorpha pilosella*; *Tricyphona calcar*; *T. inconstans*; *Rhaphidolabina flaveola*; *Liogma nodicornis*; *Oropeza venosa*; *Tanyptera topazina*; *Tipula oropezoides*; *T. bella*; *T. strepens*; *T. collaris*; *T. sarta*; *T. senega*; *T. trivittata*; *T. valida*; *T. abdominalis*; *T. collaris*; *T. tephrocephala*; *T. cayuga*; *T. tricolor*; *T. submaculata*; *T. hermannia*; *Nephrotoma euceroidea*; *N. lugens*; *N. tenuis*; *Ptychoptera rufocincta*; *Bittacomorphella jonesi*; *Bittacomorpha clavipes*.

On the edges of the woods, where the Moordenerkill flows along it, occurred: *Dicranomyia simulans*; *Gonomyia mathesoni*; *Cryptolabis paradoxa*; *Eriocera spinosa*; *Oropeza albipes*.

On June 11th, in the higher and dryer parts of the woods, the following additional species occurred: *Limonia triocellata*; *L. indigena*; *Gonomyia manca*; *Erioptera armata*; *Ormosia deviata*; *Elephantomyia westwoodi*; *Tipula fuliginosa*; *T. longiventris*; *Nephrotoma polymera*; *N. incurva*.

On August 26-30, 1922, the following crane-flies were taken in the swampy parts of the woods: *Dicranomyia gladiator*; *D. pubipennis*; *D. liberta*; *D. immodesta*; *Rhipidia maculata*; *Gonomyia sulphurella*; *G. florens*; *G. subcinerea*; *Gnophomyia tristissima*; *Molophilus pubipennis*; *Ormosia nigripila*; *O. deviata*; *O. monticola*; *Erioptera venusta*; *E. caloptera*; *E. armata*; *Pseudolimnophila luteipennis*; *P. nigripleura*; *Limnophila fuscovaria*; *L. lenta*; *Pilaria tenuipes*; *Adelphomyia cayuga*; *Pedicia albivitta*; *Tricyphona inconstans*; *Rhaphidolabina flaveola*; *Pentoptera albitarsis*; *Eriocera spinosa*; *Prionocera fuscipennis*; *Tipula bella*; *T. tricolor*; *T. sayi*; *Nephrotoma ferruginea*; *Bittacomorphella jonesi*; *Bittacomorpha clavipes*.

#### ***Molophilus cramptoni* sp. n.**

General coloration dark brown; antennae of male moderately elongate, if bent backward extending approximately to the wing-root; male hypopygium with the basal dististyle a powerful chitinized rod, on the mesal face before midlength bearing a long slender spine.

*Male*.—Length about 3.5 mm.; wing, 4.8 mm.

*Female*.—Length, 4.5-5 mm.; wing, 4.8-5.4 mm.

Rostrum and palpi dark brown. Antennae of moderate length, in the male if bent backward extending approximately to the wing-root; antennae dark brown throughout, the elongate-oval flagellar segments with long white setae. In the female, the antennae are shorter and would not reach the wing-root if bent backwards. Head dark gray.

Mesonotum and pleura dark brown with a very sparse grayish bloom; humeral region of praescutum scarcely brightened. Halteres pale yellow, the knobs more or less infuscated. Legs with the coxae and trochanters obscure brownish yellow; remainder of legs brown, the femoral bases obscure yellow. Wings strongly tinged with brown, the veins and macrotrichiae still darker. Venation: Vein 2nd *A* ending near midlength of the petiole of cell  $M_3$ .

Abdomen dark brown. Male hypopygium with the basistyles terminating in a blackened, slightly curved spine. Basal dististyle a powerful, entirely chitinized rod, before midlength on the mesal face with a long, slender spine that is

a little more than one-third the length of the apex beyond it, the latter dilated before the apex and with the margins delicately and regularly toothed, the teeth becoming smaller toward the apical spine. Outer dististyle with the mesal arm slender and extending a little beyond the broadly dilated lateral blade.

*Habitat*: New York.

Holotype, ♂, Brookview, Rensselaer County, June 25, 1923 (C. P. Alexander).

Allotopotype, ♀, June 30, 1923.

Paratopotypes, 2 ♂♂, 16 ♀♀, June 20-30, 1923.

This interesting crane-fly is named in honor of Dr. G. C. Crampton, to whom Dipterologists are indebted for invaluable critical studies on the morphology of the order.

#### ***Molophilus quadrispinosus* sp. n.**

*Male*.—Length about 3.5 mm.; wing, 4.8 mm.

Generally similar to *M. cramptoni* sp. n., in the elongate antennae and general coloration, differing conspicuously in the structure of the male hypopygium.

Head dark gray. Mesonotum uniformly dark grayish brown, the humeral angles obscure brownish yellow. Pleura dark brown. Legs brown, the femoral bases extensively paler. Wings with a faint brown tinge, the veins and macrotrichiae slightly darker brown. Venation: Petiole of cell  $M_3$  short, about one-fourth longer than the basal deflection of  $Cu_1$ ; vein 2nd *A* ending about opposite midlength of this petiole. Male hypopygium with each basal dististyle a powerful, entirely chitinized black rod that terminates in a powerful, acute outer spine that is about one-half as long as the enlarged base of the style; at the base of this apical spine, a roughened, slightly smaller spine from an enlarged base, directed mesad and slightly caudad; at the base, lying in the axil between this and the outer terminal spine a shorter and more slender, straight spine, directed caudad and slightly mesad; in addition, a fourth small spine on mesal face of the stem of the style near two-thirds its length, making a total of four conspicuous spines borne by this appendage.

*Habitat*: New York.

Holotype, ♂, Needham's Glen, Ithaca, Tompkins County, June 4, 1911 (C. P. Alexander).

**Rhaphidolabis (Plectromyia) confusa** sp. n.

*Male*.—Length about 4–4.5 mm.; wing, 4.8–5.6 mm.

*Female*.—Length about 5 mm.; wing, 5.6–5.8 mm.

Generally similar to *R. (P.) modesta* (Osten Sacken), from which it differs as follows:

Lateral praescutal stripes obliterated behind, the median stripe entire. Wings pale brownish subhyaline, the stigma faintly indicated, pale brown. Venation: *Rs* short, gently arcuated; cell *R*<sub>3</sub> almost always with a conspicuous petiole that is usually equal to or longer than the basal deflection of *R*<sub>5</sub>. Male hypopygium with the details differing from *R. modesta*: Dorsal interbase a flattened blade of nearly uniform diameter, the apex feebly notched; ventral interbase stouter, slightly curved, split at apex into two teeth, one acute, the other obtusely rounded.

In *R. (P.) modesta*, the dorsal interbase is flattened, the lateral angle a long, slender spine, the mesal lobe a broad, subtruncate blade; ventral interbase a long, slender, gently curved hook, terminating in a long acute tip, some distance back from the apex bearing a small, acute lateral tooth.

*Habitat*: New York and New England.

Holotype, ♂, Mt. Toby, Franklin County, Massachusetts, altitude 800 feet, May 20, 1923 (C. P. Alexander).

Allotopotype, ♀.

Paratopotypes, 100 ♂ ♀; paratypes, 3 ♂ ♀, Mt. Lake, Fulton County, New York, altitude 1,600 feet, June 13, 1916 (C. P. Alexander); 1 ♂, Helderbergs, Albany County, New York, June 5, 1923 (C. P. Alexander).

The Fulton County paratypes had earlier (Crane-flies of New York, Part I: 815, 1919) been recorded as *R. (P.) modesta* (Osten Sacken). The fly is common and widely distributed in the Berkshires of Western Massachusetts; it was noted in great numbers along small mountain streams near Charlemont, Franklin County, Massachusetts, in early June, 1923.

**Rhaphidolabis (Rhaphidolabis) forceps** sp. n.

Belongs to the *tenuipes* group; closest to *R. persimilis* Alexander; mesonotal praescutum with three black stripes; male hypopygium with the ventral face of each basistyle produced ventrad and mesad into a stout, fleshy lobe; ventral interbase a chitinized blade that is profoundly bifid, the arms acute and directed toward one another, forceps-like.

*Male*.—Length about 5 mm.; wing, 5.5–6 mm.

*Female*.—Length, 5.5–6 mm.; wing, 7–7.5 mm.

Rostrum and palpi black. Antennae black throughout. Head blackish, pruinose on orbits and in front.

Mesonotal praescutum light gray with three conspicuous blackish stripes, the lateral stripes crossing the suture and covering the scutal lobes; scutellum brownish testaceous; postnotal mediotergite blackened, especially posteriorly. Pleura pruinose, the dorsal portions of the pleuro-tergite paler. Halteres pale, the knobs infuscated. Legs with the coxae infuscated basally, the tips paler; trochanters yellowish testaceous; remainder of legs dark brown, the femoral bases paler. Wings with a faint brownish tinge, the ill-defined stigma darker; veins dark brown. Venation:  $R_s$  arcuated, in alignment or nearly so with  $R_5$ , the basal deflection of which is very short or lacking; petiole of cell  $R_3$  subequal to  $r-m$ ; outer deflection of  $R_2$  close to the tip of  $R_1$ ; cell  $M_1$  present.

Abdominal tergites dark brown, the sternites and hypopygium paler. Male hypopygium with the median lobe of the tergite very slender. Basistyle with the ventral face produced ventrad and mesad into a stout, conspicuous lobe that terminates in numerous setae; fleshy dististyle shorter than the chitinized dististyle, the latter with the slender apex obtuse. Dorsal interbase a powerful sickle-shaped hook, more oval in shape than in *R. tenuipes*, the apex acute; ventral interbase profoundly bifid, appearing as two slender arms that suggest a pair of ice-tongs, the tips acute, the stem of the interbase with from five to seven setae.

*Habitat*: New York and New England.

Holotype, ♂, Helderbergs, Albany County, New York, June 5, 1923 (C. P. Alexander).

Allotopotype, ♀.

Paratopotypes, 7 ♂ ♀; paratypes, ♂, Brookview, Rensselaer County, New York, June 16, 1923 (C. P. Alexander); 2 ♂ ♂, Crampton's Camp, near Sunderland, Franklin County, Massachusetts, May 30, 1923 (C. P. Alexander).

The types of the new species described above are preserved in the collection of the writer.